

CLAIMS

1. A magnetic separator for separating magnetic material from a fluid flow flowing in a flow path including one tube portion disposable in the flow path and a magnet within the tube portion movable between a separator position in the tube portion and a release position in which the magnet is withdrawn from the tube portion characterised in that the magnet is in the form of a shuttle and in that the tube portion is part of a longer tube disposable within the flow path whereby the magnet can be moved between its positions by differential pressure being created across the magnet.
2. A separator as claimed in Claim 1 wherein there are a plurality of tubes and a magnet shuttle in each tube.
3. A separator as claimed in claim 2 wherein the tubes are arranged in a general circular array.
4. A separator as claimed in claim 3 wherein the tubes are disposed in a generally annular chamber.
5. A separator as claimed in claim 4 further comprising an annular baffle plate encircling the tubes as a location between the positions.
6. A separator as claimed in claimed in claim 5 wherein an edge of the baffle plate is profile to allow fluid flow between the positions.
7. A separator as claimed in any of the preceding claims wherein the or each magnet shuttle includes linear array of magnets and seals at either end array for sealing with the inner face of a tube.

8. A separator as claimed in any one of the preceding claims further including control apparatus for supplying compressed air to the tube to move the shuttle, or shuttles, between its positions.

5 9. A separator as claimed in Claim 1 further including a baffle encircling the tube or tubes at a location between the positions.

10. A separator as claimed in any one of the preceding claims further including an outlet valve for directing the fluid in a first direction when the shuttle is in its separator position and in a second direction when the shuttle is not in its separator position.

10 11. A separator as claimed in any one of the preceding claims wherein the tube, or tubes, is disposed in a chamber divided by a baffle plate through which the tubes extend and release position lies upstream of the baffle, whilst the separator position lies downstream of the baffle.

15 12. A magnetic separator comprising a plurality of tubes disposable in a flow path and containing magnets movable within the tube between a separator position and a release position characterised in that the tubes are arranged in a circular array.

20 13. A magnetic separator for separating magnetisable material from a fluid flow flowing along a new path, a magnet movable between a separator position and a release position characterised in that the release position lies also within the flow path.

14. A separator as claimed in Claim 8 having the features of any one of Claims 1 to 7.